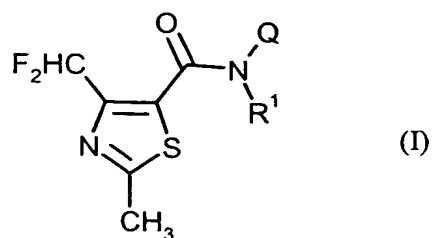


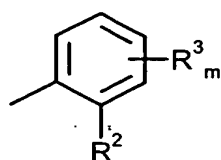
Claims

1. A thiazole(bi)cycloalkylcarboxanilide of the formula (I)

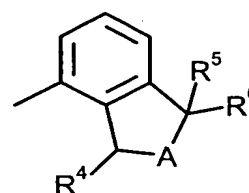


5 in which

Q represents a group



or



10 R^1 represents hydrogen, C_1 - C_8 -alkyl, C_1 - C_6 -alkylsulfinyl, C_1 - C_6 -alkylsulfonyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_3 - C_8 -cycloalkyl; C_1 - C_6 -haloalkyl, C_1 - C_4 -haloalkylsulfonyl, C_1 - C_4 -haloalkylsulfinyl, C_1 - C_4 -haloalkylsulfonyl, halo- C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_3 - C_8 -halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; $-COR^7$, $-CONR^8R^9$ or $-CH_2NR^{10}R^{11}$,

15 R^2 represents C_3 - C_{12} -cycloalkyl, C_3 - C_{12} -cycloalkenyl, C_6 - C_{12} -bicycloalkyl or C_6 - C_{12} -bicycloalkenyl, each of which is optionally mono- or polysubstituted by identical or different substituents from the group consisting of halogen, cyano, hydroxyl, C_1 - C_8 -alkyl, C_1 - C_8 -alkoxy, C_1 - C_6 -haloalkyl, C_1 - C_6 -haloalkoxy having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

20 R^3 represents fluorine, chlorine, bromine or methyl,

m represents 0, 1, 2, 3 or 4,

A represents O (oxygen) or CR^{12} ,

R^4 , R^5 , R^6 and R^{12} independently of one another represent hydrogen, methyl or ethyl,

25 R^7 represents hydrogen, C_1 - C_8 -alkyl, C_1 - C_8 -alkoxy, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_3 - C_8 -cycloalkyl; C_1 - C_6 -haloalkyl, C_1 - C_6 -haloalkoxy, halo- C_1 - C_4 -alkoxy- C_1 -

C₄-alkyl, C₃-C₈-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms or 4-(difluoromethyl)-2-methyl-1,3-thiazol-2-yl,

R⁸ and R⁹ independently of one another represent hydrogen, C₁-C₈-alkyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-cycloalkyl; C₁-C₈-haloalkyl, halo-C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

R⁸ and R⁹ furthermore together with the nitrogen atom to which they are attached form a saturated heterocycle which is optionally mono- or polysubstituted by identical or different substituents from the group consisting of halogen and C₁-C₄-alkyl and which has 5 to 8 ring atoms, where the heterocycle may contain 1 or 2 further nonadjacent heteroatoms from the group consisting of oxygen, sulfur and NR¹³,

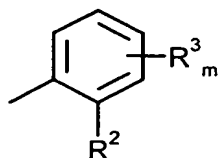
R¹⁰ and R¹¹ independently of one another represent hydrogen, C₁-C₈-alkyl, C₃-C₈-cycloalkyl; C₁-C₈-haloalkyl, C₃-C₈-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

R¹⁰ and R¹¹ furthermore together with the nitrogen atom to which they are attached form a saturated heterocycle which is optionally mono- or polysubstituted by identical or different substituents from the group consisting of halogen and C₁-C₄-alkyl and which has 5 to 8 ring atoms, where the heterocycle may contain 1 or 2 further nonadjacent heteroatoms from the group consisting of oxygen, sulfur and NR¹³,

R¹³ represents hydrogen or C₁-C₆-alkyl.

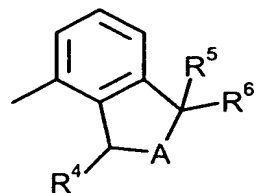
2. The thiazole(bi)cycloalkylcarboxanilide of the formula (I) as claimed in claim 1 in which

Q represents a group



(Q-1)

or



(Q-2)

R¹ represents hydrogen; C₁-C₆-alkyl, C₁-C₄-alkylsulfinyl, C₁-C₄-alkylsulfonyl, C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-cycloalkyl; C₁-C₄-haloalkyl, C₁-C₄-

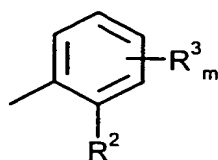
- haloalkylsulfanyl, C₁-C₄-haloalkylsulfinyl, C₁-C₄-haloalkylsulfonyl, halo-C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; -COR⁷, -CONR⁸R⁹ or -CH₂NR¹⁰R¹¹,
- 5 R² represents C₃-C₁₂-cycloalkyl, C₃-C₁₂-cycloalkenyl, C₆-C₁₂-bicycloalkyl or C₆-C₁₂-bicycloalkenyl, each of which is optionally mono- to tetrasubstituted by identical or different substituents from the group consisting of fluorine, chlorine, bromine, cyano, hydroxyl, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy having in each case
- 10 1 to 9 fluorine, chlorine and/or bromine atoms,
- R³ represents fluorine, bromine or methyl,
- m represents 0, 1, 2 or 3,
- A represents O (oxygen) or CR¹²,
- R⁴, R⁵, R⁶ and R¹² independently of one another represent hydrogen, methyl or ethyl,
- 15 R⁷ represents hydrogen, C₁-C₆-alkyl, C₁-C₄-alkoxy, C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-cycloalkyl; C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, halo-C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms or 4-(difluoromethyl)-2-methyl-1,3-thiazol-2-yl,
- R⁸ and R⁹ independently of one another represent hydrogen, C₁-C₆-alkyl, C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-cycloalkyl; C₁-C₄-haloalkyl, halo-C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,
- 20 R⁸ and R⁹ furthermore together with the nitrogen atom to which they are attached form a saturated heterocycle which is optionally mono- to tetrasubstituted
- 25 by identical or different substituents from the group consisting of halogen and C₁-C₄-alkyl and which has 5 to 8 ring atoms, where the heterocycle may contain 1 or 2 further nonadjacent heteroatoms from the group consisting of oxygen, sulfur and NR¹³,
- R¹⁰ and R¹¹ independently of one another represent hydrogen, C₁-C₆-alkyl, C₃-C₆-cycloalkyl; C₁-C₄-haloalkyl, C₃-C₆-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,
- 30 R¹⁰ and R¹¹ furthermore together with the nitrogen atom to which they are attached form a saturated heterocycle which is optionally mono- or polysubstituted
- 35 by identical or different substituents from the group consisting of halogen and C₁-C₄-alkyl and which has 5 to 8 ring atoms, where the heterocycle may

contain 1 or 2 further nonadjacent heteroatoms from the group consisting of oxygen, sulfur and NR¹²,

R¹³ represents hydrogen or C₁-C₄-alkyl.

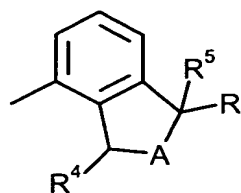
- 5 3. The thiazole(bi)cycloalkylcarboxanilide of the formula (I) as claimed in claim 1 in which

Q represents a group



(Q-1)

or



(Q-2)

10 R¹ represents hydrogen, methyl, ethyl, n- or isopropyl, n-, iso-, sec- or tert-butyl, pentyl or hexyl, methylsulfinyl, ethylsulfinyl, n- or isopropylsulfinyl, n-, iso-, sec- or tert-butylsulfinyl, methylsulfonyl, ethylsulfonyl, n- or isopropylsulfonyl, n-, iso-, sec- or tert-butylsulfonyl, methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, cyclopropyl, cyclopentyl, cyclohexyl, trifluoromethyl, trichloromethyl, trifluoroethyl, difluoromethylsulfanyl, difluorochloromethylsulfanyl, trifluoromethylsulfanyl, trifluoromethylsulfinyl, trifluoromethylsulfonyl, trifluoromethoxymethyl; -COR⁷, -CONR⁸R⁹ or -CH₂NR¹⁰R¹¹,

15 R² represents C₃-C₁₀-cycloalkyl, C₃-C₁₀-cycloalkenyl, C₆-C₁₀-bicycloalkyl or C₆-C₁₀-bicycloalkenyl, each of which is optionally mono- to trisubstituted by
20 identical or different substituents from the group consisting of fluorine, chlorine, bromine, cyano, hydroxyl, methyl, ethyl, n- or isopropyl, n-, iso-, sec- or tert-butyl, methoxy, ethoxy, n- or isopropoxy, n-, iso-, sec- or tert-butoxy, trifluoromethyl, difluoromethyl, trichloromethyl, difluorochloromethyl, trifluoromethoxy, difluoromethoxy, trichloromethoxy, difluorochloromethoxy,

25 R³ represents fluorine, bromine or methyl,

m represents 0, 1, 2 or 3,

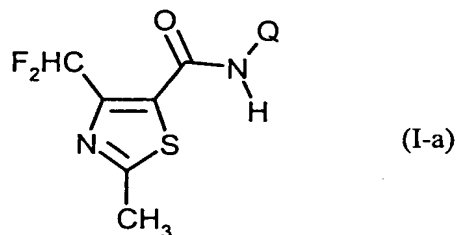
A represents O (oxygen) or CR¹²,

R⁴ represents methyl or ethyl,

30 R⁵ and R⁶ each represent methyl,

- R^7 represents hydrogen, methyl, ethyl, n- or isopropyl, tert-butyl, methoxy, ethoxy, tert-butoxy, cyclopropyl; trifluoromethyl, trifluoromethoxy or 4-(difluoromethyl)-2-methyl-1,3-thiazol-2-yl,
- R^8 and R^9 independently of one another represent hydrogen, methyl, ethyl, n- or isopropyl, n-, iso-, sec- or tert-butyl, methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, cyclopropyl, cyclopentyl, cyclohexyl; trifluoromethyl, trichloromethyl, trifluoroethyl, trifluoromethoxymethyl,
- R^8 and R^9 furthermore together with the nitrogen atom to which they are attached form a saturated heterocycle from the group consisting of morpholine, thiomorpholine and piperazine which is optionally mono- to tetrasubstituted by identical or different substituents from the group consisting of fluorine, chlorine, bromine and methyl, where the piperazine may be substituted on the second nitrogen atom by R^{13} ,
- R^{10} and R^{11} independently of one another represent hydrogen, methyl, ethyl, n- or isopropyl, n-, iso-, sec- or tert-butyl, methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, cyclopropyl, cyclopentyl, cyclohexyl; trifluoromethyl, trichloromethyl, trifluoroethyl, trifluoromethoxymethyl,
- R^{10} and R^{11} furthermore together with the nitrogen atom to which they are attached form a saturated heterocycle from the group consisting of morpholine, thiomorpholine and piperazine which is optionally mono- to tetrasubstituted by identical or different substituents from the group consisting of fluorine, chlorine, bromine and methyl, where the piperazine may be substituted on the second nitrogen atom by R^{13} ,
- R^{12} represent hydrogen or methyl,
- R^{13} represents hydrogen, methyl, ethyl, n- or isopropyl, n-, iso-, sec- or tert-butyl.

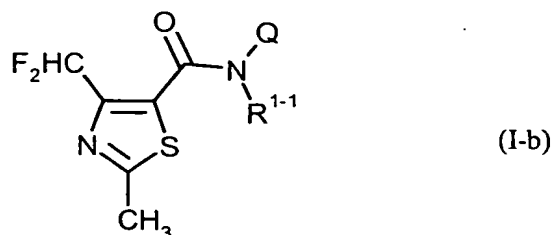
4. A thiazole(bi)cycloalkylcarboxanilide of the formula (I-a)



30 in which

Q is as defined in claim 1.

5. A thiazole(bi)cycloalkylcarboxanilide of the formula (I-b)

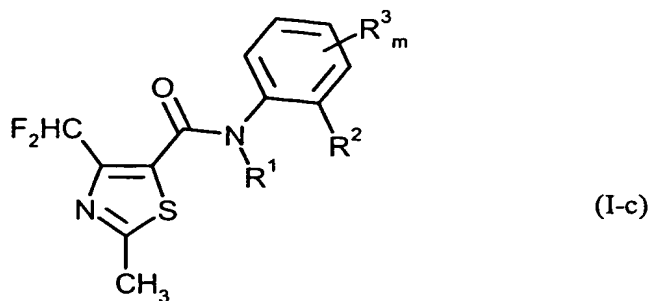


5 in which

Q is as defined in claim 1.

10 R^{1-1} represents C_1 - C_8 -alkyl, C_1 - C_6 -alkylsulfinyl, C_1 - C_6 -alkylsulfonyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_3 - C_8 -cycloalkyl; C_1 - C_6 -haloalkyl, C_1 - C_4 -haloalkylsulfinyl, C_1 - C_4 -haloalkylsulfonyl, halo- C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_3 - C_8 -halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; $-COR^7$, $-CONR^8R^9$ or $-CH_2NR^{10}R^{11}$, R^7 , R^8 , R^9 , R^{10} and R^{11} are as defined in claim 1.

6. A thiazole(bi)cycloalkylcarboxanilide of the formula (I-c)

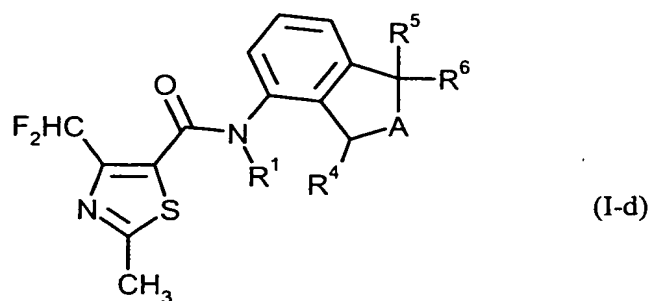


15

in which

R^1 , R^2 and R^3 are as defined in claim 1.

7. A thiazole(bi)cycloalkylcarboxanilide of the formula (I-d)

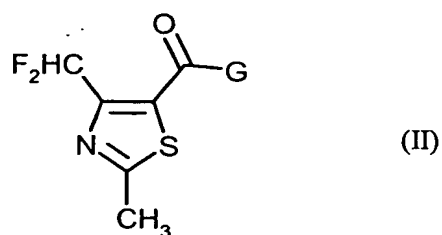


in which

A, R⁴, R⁵ and R⁶ are as defined in claim 1.

- 5 8. A process for preparing thiazole(bi)cycloalkylcarboxanilides of the formula (I) as claimed in claim 1, characterized in that

A) carboxylic acid derivatives of the formula (II)



10 in which

G represents halogen, hydroxyl or C₁-C₆-alkoxy,

are, in a first step, reacted with aniline derivatives of the formula (III)

15 H₂N—Q (III)

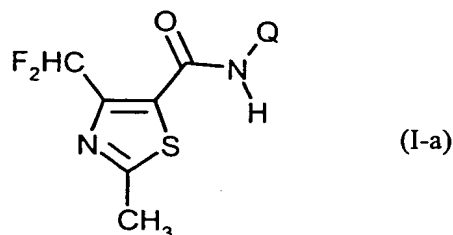
in which

Q is as defined in claim 1

in the presence of an acid binder and in the presence of a diluent

20

and the resulting products of the formula (I-a)



in which

Q is as defined in claim 1

5 are, if appropriate, reacted in a second step with a halide of the formula (III)



in which

10 R^{1-1} represents C_1 - C_8 -alkyl, C_1 - C_6 -alkylsulfinyl, C_1 - C_6 -alkylsulfonyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_3 - C_8 -cycloalkyl; C_1 - C_6 -haloalkyl, C_1 - C_4 -haloalkylsulfonyl, C_1 - C_4 -haloalkylsulfinyl, C_1 - C_4 -haloalkylsulfonyl, halo- C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, C_3 - C_8 -halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; $-COR^7$, $-CONR^8R^9$ or $-CH_2NR^{10}R^{11}$,

15 R^7 , R^8 , R^9 , R^{10} and R^{11} are as defined in claim 1 and

X represents chlorine, bromine or iodine,

in the presence of a base and in the presence of a diluent.

20 9. A composition for controlling unwanted microorganisms, characterized in that it comprises at least one thiazole(bi)cycloalkylcarboxanilide of the formula (I) as claimed in claim 1, in addition to extenders and/or surfactants.

25 10. The use of thiazole(bi)cycloalkylcarboxanilides of the formula (I) as claimed in claim 1 for controlling unwanted microorganisms.

11. A method for controlling unwanted microorganisms, characterized in that thiazole(bi)cycloalkylcarboxanilides of the formula (I) as claimed in claim 1 are applied to the microorganisms and/or their habitat.

12. A process for preparing compositions for controlling unwanted microorganisms, characterized in that thiazole(bi)cycloalkylcarboxanilides of the formula (I) according to claim 1 are mixed with extenders and/or surfactants.